

EMERGENCY STOP

Purpose

The purpose of this exercise is to develop the student's ability to bring the vehicle to a quick, controlled stop during an emergency situation.

Location -- Off street

Directions

1. Place markers to form an alley, that is 10 feet in width and at least 100 feet in length along which the vehicle can be brought to a controlled stop. At the entrance to the alley should be a "braking point", consisting of a flag or clearly identifiable traffic cone, to signal the point at which brakes are to be applied.

2. Drivers will approach the maneuver area (alley). Upon reaching the Braking Point they must apply the brakes and bring the car to a stop.

3. Each session with a student will consist of five emergency braking stops each at 10 mph, 20 mph, and 30 mph for a total of fifteen emergency stops

If the student does not perform the maneuver correctly at a certain speed, repeat that same entry speed until maneuver is completed.

4. If there is more than one student, the students will rotate from BTW to posts on the range to observe wheel movement. The instructor should instruct observer students to observe the braking technique employed by the driver (by observing tire rotation) and its effect upon stopping distance.

5. The Instructor will ride in the vehicle to monitor exercise entry speed and braking technique.

6. If the student achieves minimum braking distance prior to the end of the 5 runs for each speed, the additional time may be given to students who are slower to learn.

7. Discuss with student(s) the loss of control and longer stopping distances associated with full lockup. If any student is unconvinced, demonstrate a full lockup at 10 mph.

Observation

The instructor will observe for failure to perform the following procedures properly:

- Apply brakes quickly
- Apply brakes to just short of lockup
- Release brake pressure to keep wheels just short of lockup until vehicle has come to a complete stop

The instructor should watch for the following problems:

1. Too strong an application--Student continually brakes to the point of lockup

2. Stiffening at the wheel--Using a "Whoa Nellie" grip on the wheel resulting in inability to turn wheel quickly enough.

3. Cheating on maneuver--Approaching too slowly or braking too soon.

4. Underapplication--If stopping distance does not decrease after repeated runs, students may not be applying maximum braking pressure.

Evaluation

Student performance will be evaluated against the following criteria:

1. Uses minimum stopping distance consistently.
2. Maintains control of vehicle.

EVASIVE STEERING

Purpose

The purpose of this exercise is to develop students ability to perform evasive steering maneuvers. Several different maneuvers will be practiced, including: left and right evasive steer; evasive steer and stop; and controlled brake, evasive steer, brake.

Location -- Off street

Directions

1. Layout a course consisting of two parallel rows of cones, 100 feet long and 30 feet apart. The center 10 feet of the entrance to the alley created by the cones will be blocked by cones so that vehicles entering the alley will have to enter at the left or right of the alley. The left and right entrances will both be 10 feet wide.

One cone will be placed approximately 50 feet in front of the entrance to the alley to mark the decision point.

2. Each session with a student will follow the pattern listed:

a. Maneuver 1 Evasive Steering Right or Left--During this maneuver, the instructor will direct each student to:

- (1) On command of the instructor, accelerate to 30 mph moving toward the blocked center portion of the alley.
- (2) At the decision point the instructor will command the student to steer either to the right or left around the barrier; with no braking.
- (3) Perform the maneuver as smoothly and as quickly as possible.
- (4) Return to start point, repeat until the time allotted the student has elapsed.

b. Maneuver 2 Evasive Steering with Controlled Brake and Stop--During the maneuver, the instructor will direct each student to:

Steps (1)-(4) of Maneuver 1 are to be followed, except:

- (2) After steering right or left, bring the vehicle to a stop as quickly as possible (without locking the brakes).

c. Maneuver 3 Brake-Evasive Steer-Stop During the Maneuver--The instructor will direct each student to:

Steps (1)-(4) of Maneuver 1 are to be followed, except:

- (2) As soon as the right or left command is given, the student should brake to reduce speed before evasive steering, release brakes and steer, reapply brakes to stop as quickly as possible.

3. If there is more than one student, the students will rotate from behind the wheel to a position on the range to observe evasive steering techniques.

4. The instructor will ride in the vehicle to monitor student performance.

5. Each maneuver will be performed at 30 mph.

Observations

The instructor will observe for failure to perform the following procedures properly:

Minimize turn

Start as early as possible
Turn only as much as needed

Turn quickly

Use hand-over-hand technique

Avoid braking in turn

Could lock wheel
Locking wheels during turn could result in loss of control

Countersteer

Must be prepared to countersteer quickly
Initiate countersteer as soon as front of vehicle clears obstacle

Brake to stop

Apply brakes quickly
Apply brakes to just short of lockup
Keep brake pressure just short of lockup until vehicle has come to a complete stop

Instructor should watch for the following common problems:

1. Turning the wrong way--Students who "guess" at the steer command will turn in the wrong direction about half of the time. Such students should be instructed to approach barrier at a lower speed until the maneuver has been performed correctly.

2. Failure to perform correctly--Students who continue to have problems with any exercise, should reduce the approach speed in 5 mph decrements. If this does not work, tell the student in which direction to start before approaching the decision point. After the student has mastered this evasive steering, return to the practice of withholding the direction of turn until the decision point has been reached.

Evaluation

Student will be evaluated against the following criteria:

- Does not hit exercise markers
- Does not lock wheels during braking
- Steers in the correct direction on command